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Comparative Study of Productivity and Efficiency of Select Public Sector and Private Sector Banks in India

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Abstract

With the initiation of economic reforms in India, Indian Banking Sector witnessed many notable changes. Rise in competition, sophisticated information technology, diminution in processing costs, wearing away of product and geographical boundaries, minimisation of Government regulations — all forced the public sector banks to compete with the private sector banks specially after second generation reforms. The present comparative analysis has been carried out for a period from 2008-09 to 2016-17 using the examples of select 11 Public Sector Banks and 11 Private Sector Banks with the objective to compare and analyse the productivity and efficiency of select banks with various ratios.

Key-words: Public Sector Banks, Private Sector Banks, Productivity, Operating efficiency, Financial efficiency, Mann-Whitney U Test.

1. Introduction

Efficient, effective and solvent financial institutions are considered to be the backbone as well as part and parcel of an economy on which the real economic progress of any country depends. In case of Indian economy, too, the same resonance is felt. Though the banking sector of India started its journey since pre-independence period to lay down its service for complete perfection in the teeth of so many oppositions specially like bank failures due to unorganised banking structure. Despite different setbacks, a new ray of hope was sensed in banking sphere of India during post-independence era. An ebullient and dynamic banking system started to materialize in assistance with steady pecuniary upswing, increase in cash supply, swelling of banking practice, supervision and suggestions of The Reserve Bank of India and above all the policy of Nationalisation of banks. All those potent factors brought about a wide-ranging variation in Indian financial management creating a pristine scenario in Indian banking sector with the help of massive provision of finance, putting an end to close attention of economic supremacy, inimical contest among different banks, asymmetrical economic swelling and aversion of fund wastage. Vigilant study regarding the origination of Indian banking system in 1786 i.e. in pre-independence period manifestly points out that the then banking industry had to even its way, full of impediments, to make Indian economy so progressive, strong, potent and operative that it can give rise to all round development of India. With the passage of time the existing laws were revised, all other problems, prevailing so long, were solved through transformations. In spite of those amendments and reconstructions, financial institutions of India failed to gain expected excellence and periodic liquidations came into sight owing to insufficient rate of swelling with a view to getting rid of those setbacks Banking Companies Act, 1949 was introduced by The Government of India and in the same year it was modified as Banking Regulation Act, 1949. At the same time the RBI was authorised as the chief Banking authority. Notwithstanding, on account of inadequate deployment of deposit, credibility of the banks remained open to question and their commitment to mobilise their resources for the utmost interest of their owners-viz, depositors and investors, failed to yield any fruitful outcome. Considering all those consequences, initiation of social control in 1967 to encourage the banks in respect of control and credit facility as well as nationalisation of 14 leading Commercial banks in 1969, along with 6 more such banks in 1980 brought about a revolutionary modification in Indian Banking sector. Yet, productivity and performance persisted below the benchmark due to the deterioration of portfolio quality, erosion of profitability and work technology of inferior quality. Because of such inconveniences, Public Sector Banks had to bear the burden of losses and were unable to cope with the challenges of combative environment. Under these circumstances, Government of India initiated a committee under the chairmanship of Mr. Narasimham in 1990 for necessary reform measures in banking sector to fight shy of insufficiencies of pecuniary institutions. Giving priority to versatility of employment and professional control of banking system, The Committee reported that “the resources of the financial system are held by financial institutions in trust and have to be deployed for the maximum benefit of their owners-viz, depositors and investors. The safety of their funds should be the primary concern of banks and regulatory authorities and ensuring solvency, health and efficiency of the institutions should be control to effective financial reform” and also recommended exclusive suggestions for the enhancement of skill and productivity so that the banking sector could attain the benefit of profit, so that an efficient, competitive and stable banking sector, capable for contributing in greater measure to encourage growth could be set up. In addition, for the proper application of those suggestions Government of India made different efforts to have consigned efficiency through operational flexibility and improved economic competence for industrial soundness. Besides ,another committee with Mr. Narasimham known as Committee on Banking Sector Reforms(II) in 1998 was instigated by The Government of India for the assessment of those recommendations of Narasimham Committee –I and the steps taken by The Government of India and RBI to make them effectual, the report of which was put forward in April,1990 identifying all necessary information of all the pitfalls, for example, capital adequacy, bank mergers, setting up of banks of global standard, reconstruction of bank boards and amendment of bank laws.

2. Review of Literature

Jha & Sarangi (2011) took a joint effort to evaluate the performance of seven public sector and private sector banks for the year 2009-10 by employing operating performance ratios, financial ratios, and efficiency ratios. Their findings revealed that Axis Bank ranked first and ICICI Bank, BOI, PNB, SBI, IDBI, and HDFC walked behind one after another.

Dangwal & Kapoor (2010) made a collective attempt to weigh up the financial performance of 19 Indian Nationalised Banks and appraised the growth index value of varied parameters through overall profitability indices. For the assessment of index of spread ratios, burden ratios, and profitability ratios, the particulars of those banks, for the post -reform period from 2002-03 to 2006-07 were applied. Their analysis brought it to light that out of those selected 19 banks, 4 banks showed excellence in performance, 5 managed to bring off good performance, 5 others were in the category of fair performance and remaining 6 cut a sorry figure.

Das (2010) clarified that profitability of foreign banks enhanced more with the increase of profitability of all banks. These reforms were initiated mainly for the augmentation of the soundness which was seen through credit deposit ratios, in which a higher ratio set forth greater soundness. The asset quality was the pointer of the structural soundness of the banks, higher in case of PSBs whereas pecuniary substantiality in terms of profitability was higher in private Sector banks (ROA and ROE).

Makesh (2008) made an attempt to assess the financial management practices of Federal Bank, Dhanlakshmi Bank, along with the SBI, for the financial year 2006-07, and laid it bare that all the banks mentioned above, perpetuated capital in excess of the specified norms of the RBI. The analysis unveiled that the performance of Federal Bank regarding cost management was highly satisfactory in comparison to the SBI and Dhanlakshmi Bank because of its lowest NPA Ratio to net advances and maximum return on equity.

Kumar (2008) laid emphasis on the vital participation of Private sector banks to make Indian economy solvent for the all-round progress of the country. He vividly pointed out that liberalisation brought about weighty changes in banking industry and the economic reforms as suggested by NC I &II caused revolutionary transformations in the banking sector. At the same time, new banks were allowed by the RBI to start their business. As a result, Indian Banking industry, so long dominated by the public sector banks, began to flourish in a new and prosperous way in assistance with the new generation banks being aided with sophisticated technology and improved professional management.

Koeva (2003) made an effort to blurt out the positive consequences of financial liberalization on the performance of Indian commercial banks. Emphasis was given on the deportments and determinants of banks intermediation costs and profitability during the mentioned period in this context. Outcome of the analysis made it known that lower intermediation costs and profitability of the Indian banks caused expansion in competition during financial liberalisation period.

3. Research Gap

In the present article, an attempt has been made to assess group-wise performance of both Public Sector banks and Private Sector Banks on the subject of productivity, operating efficiency and financial competence during the financial years from 2009 to 2017 which has not been undertaken so comprehensively in the earlier studies. Moreover, last two financial years, i.e. 2015-2016 and 2016-2017 were stressed on specially as elaborate disclosures in regards to Non Performing Assets (NPAs) were being made from these years and the effect of new disclosure norms regarding NPAs on the profitability of banks could be analysed from this study and it will demonstrate whether the profitability of Public Sector Banks and Private Sector banks have been affected differently or not.

4. Objectives of the Study

This study has been framed by keeping the following objectives in mind:

(i) To analyse the productivity and efficiency of Select Public and Private Sector Banks in India during post reform era;

(ii) To make a comparative analysis of productivity and efficiency of Select Public and Private Sector Banks in India during post reform era;

(iii) To suggest suitable measures and recommendations to improve the performance and efficiency of Public and Private Sector Banks in India.

5. Research Methodology

A period from 2008-09 to 2016-17 has been opted for this analysis to evaluate the performance of the twenty two top banks, eleven from Public sector and eleven from Private sector. Statistics and particulars used in this study are secondary in nature and have been accumulated from the published document of Reserve Bank of India, Annual Reports of various Banks (for a period of 9 years i.e. from 2008-09 to 2016-17) and from websites of data on India Economy. The data so collected has been analyzed with the help of appropriate statistical and accounting tools like Compounded annual growth rate, Charts, Figure, Ratio analysis, etc. To determine relative position of selected banks under this study, ranking in respect of each parameter indicating their productivity and efficiency on the basis of the value of CAGR has been assigned. Non Parametric Test (i.e. Mann-Whitney U Test) has been used with the help of SPSS 20.0 software to study the comparative analysis of productivity and efficiency of both Private Sector banks group and Public Sector Banks group.

Hypothesis

- **Null Hypothesis (H_0):** There is no significant difference in the performance between selected public and private sector banks.
- **Alternative Hypothesis (H_1)**: There is significant difference in the performance between selected public and private sector banks.

6. Comparative Analysis of Performance

The following portion has dealt with the performance of eleven public sector and eleven private sector banks during the study period 2008-2017 on the basis of productivity, operating efficiency and financial efficiency. For this purpose, following parameters have been used.

Comparative Study of Productivity of PSB and NPSB Group:

A. *Productivity*
   - Business per Branch (BPB)
   - Net Profit per Branch (NPPB)
   - Business per Employee (BPE)
   - Profit Per Employee (PPE)

Comparative Study of Operating Efficiency of PSB and NPSB Group:

B. *Operating Efficiency*
   - Interest Income as percentage of Average Working Fund (IIAWF)
   - Non- Interest Income as percentage of Average Working Fund (IIAWF)
   - Operating Profit as percentage of Average Working Fund (OPAWF)
   - Return on Assets (ROA)
   - Cost to Income Ratio (CIR)

Comparative Study of Financial Efficiency of PSB and NPSB Group:

C. *Financial Efficiency*
   - Credit-Deposit Ratio(CDR)
   - Net NPA Ratio (NPAR or NNPA)
   - Capital Adequacy Ratio (CAR)

A. Comparative Study of Productivity of PSB and NPSB Group

Comparative Study of Productivity in respect of Branches of PSBs and NPSBs

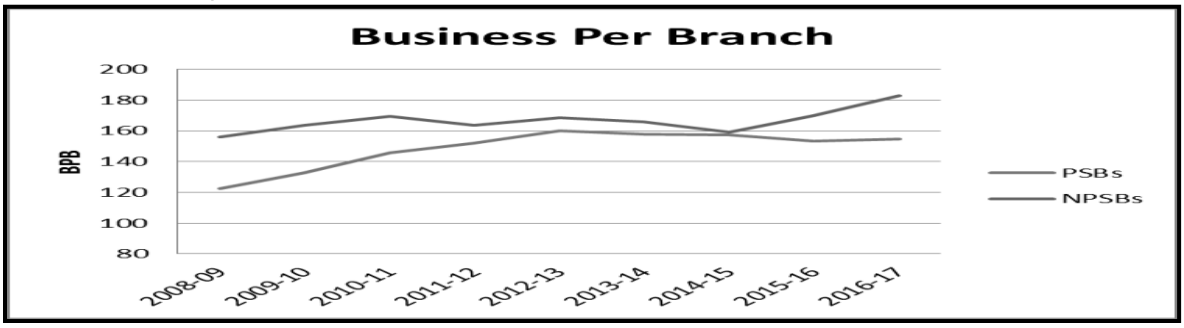
- **Business per Branch**

Table 1: Business per Branch of PSB and NPSB Group (Rs. in Crores)

Year	Business Per Branch	
	PSBs	**NPSBs**
2008-09	122.353	155.809
2009-10	132.608	163.781
2010-11	145.521	169.534
2011-12	151.927	163.663
2012-13	160.224	168.608
2013-14	157.598	166.055
2014-15	157.323	159.115
2015-16	153.478	169.685
2016-17	154.796	182.959
CAGR	2.98	2.03
Mean	148.425	166.579
SD	12.842	7.739
Rank	1st	2nd

Source: Annual Report of Various Banks. Note: Calculated by the Researcher

Figure 1: Business per Branch of PSB and NPSB Group (Rs. in Crores)



Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

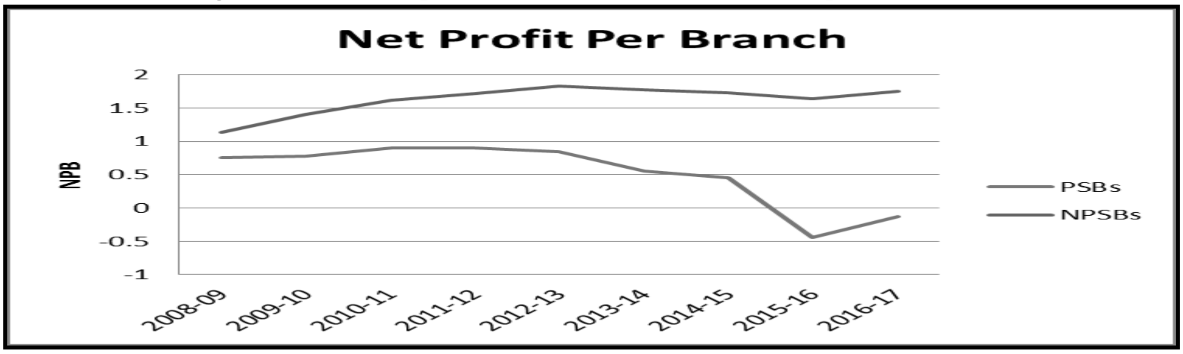
- **Net Profit per Branch**

Table 2: Net Profit Per Branch of PSB and NPSB Group (Rs in crores)

Year	Net Profit Per Branch	
	PSBs	**NPSBs**
2008-09	0.755	1.139
2009-10	0.777	1.401
2010-11	0.9055	1.62
2011-12	0.9041	1.722
2012-13	0.841	1.834
2013-14	0.552	1.772
2014-15	0.449	1.730
2015-16	-0.439	1.637
2016-17	-0.132	1.746
CAGR	-19.61	5.48
Mean	0.5126	1.622
SD	0.483	0.22
Rank	2nd	1st

Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

Figure 2: Net Profit per Branch of PSB and NPSB Group (Rs in crores)



Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

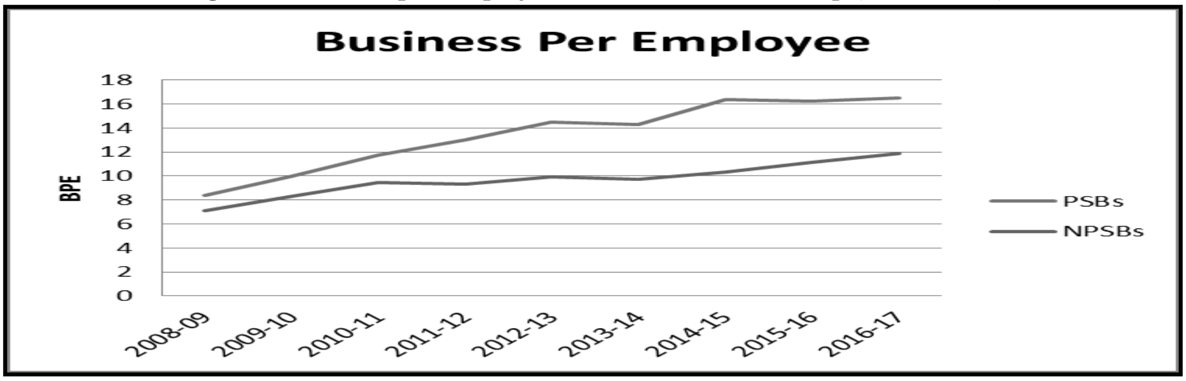
- **Business per Employee**

Table 3: Business per Employee of PSB and NPSB Group (Rs in crores)

Business Per Employee		
Year	**PSBs**	**NPSBs**
2008-09	8.398	7.098
2009-10	9.966	8.292
2010-11	11.746	9.46
2011-12	13.045	9.293
2012-13	14.515	9.911
2013-14	14.283	9.696
2014-15	16.339	10.348
2015-16	16.254	11.146
2016-17	16.473	11.844
CAGR	8.79	6.61
Mean	13.4466	9.6764
SD	2.913	1.4196
Rank	1st	2nd

Source: Annual Report of Various Banks. Note: Calculated by the Researcher

Figure 3: Business per Employee of PSB and NPSB Group (Rs in crores)



Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

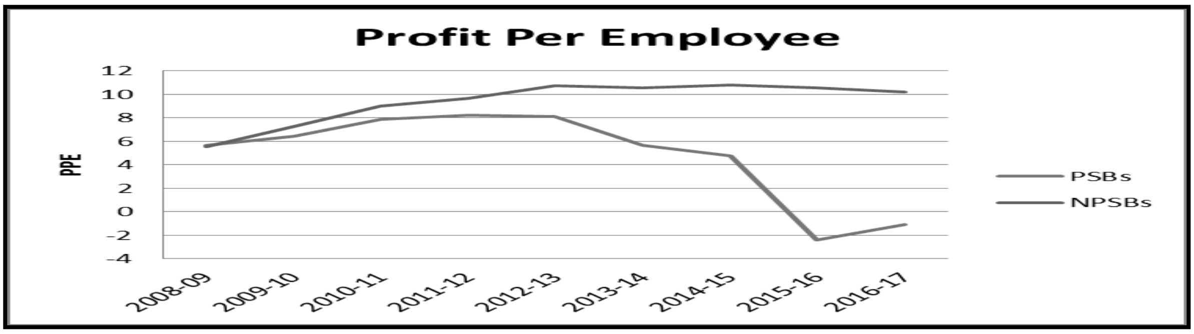
- **Profit per Employee**

Table 4: Profit per Employee of PSB and NPSB Group (Rs in Lakhs)

Year	Profit per Employee	
	PSBs	NPSBs
2008-09	5.665	5.539
2009-10	6.414	7.249
2010-11	7.836	9.018
2011-12	8.231	9.652
2012-13	8.078	10.727
2013-14	5.656	10.523
2014-15	4.775	10.805
2015-16	-2.368	10.54
2016-17	-1.103	10.2
CAGR	-18.5%	7.93
Mean	4.798	9.361
SD	3.9059	1.8257
Rank	2^{nd}	1st

Source: Annual Report of Various Banks. Note: Calculated by the Researcher

Figure 4: Profit per Employee of PSB and NPSB group (Rs in Lakhs)



Source: Annual Report of Various Banks. Note: Calculated by the Researcher

Table 5: Overall Ranking with respect to Productivity of PSB and NPSB Group

Rank in Respect of Productivity					Cumulative Result	Overall Rank
Bank Group	BPB	BPE	NPPB	PPE		
Public Sector Banks	1	1	2	2	6	-
Private Sector Banks	2	2	1	1	6	-

Source: Compiled by the Researcher from Tables—1.1, 1.2, 1.3 and 1.4

B. Comparative Study of Operating Efficiency of PSB and NPSB Group

- **Interest Income as Percentage of Average Working Fund (IIAWF)**

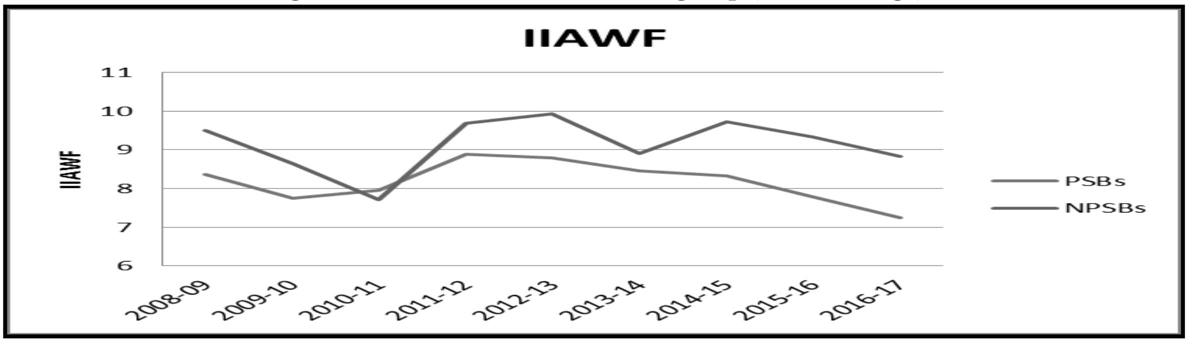
Table 6: IIAWF of PSB and NPSB Group (In Percentage)

Year	Interest Income as Percentage of Average Working Fund (IIAWF)	
	PSBs	NPSBs
2008-09	8.37	9.495

2009-10	7.746	8.651
2010-11	7.953	7.712
2011-12	8.885	9.687
2012-13	8.797	9.939
2013-14	8.463	8.904
2014-15	8.331	9.724
2015-16	7.792	9.334
2016-17	7.247	8.835
CAGR	-1.78	-0.9
Mean	8.176	9.1423
SD	0.5336	0.6955
Rank	2nd	1st

Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

Figure 5: IIAWF of PSB and NPSB group (In Percentage)



Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

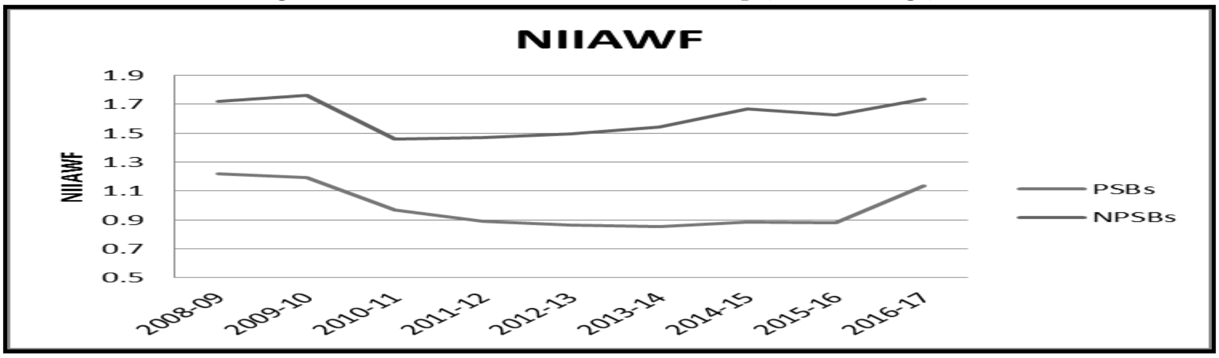
- **Non Interest Income as Percentage of Average Working Fund (NIIAWF)**

Table 7: NIIAWF of PSB and NPSB Group (In Percentage)

Year	Non Interest Income as Percentage of Average Working Fund (NIIAWF)	
	PSBs	NPSBs
2008-09	1.22	1.721
2009-10	1.195	1.765
2010-11	0.968	1.462
2011-12	0.892	1.47
2012-13	0.867	1.495
2013-14	0.857	1.545
2014-15	0.886	1.669
2015-16	0.882	1.625
2016-17	1.136	1.735
CAGR	-0.89	0.1
Mean	0.9892	1.61
SD	0.15067	0.1197
Rank	2nd	1st

Source: Annual Report of Various Banks. Note: Calculated by the Researcher.

Figure 6: NIIAWF of PSB and NPSB Group (In Percentage)



Source: Annual Reports of Various Banks. Note: Calculated by the Researcher.

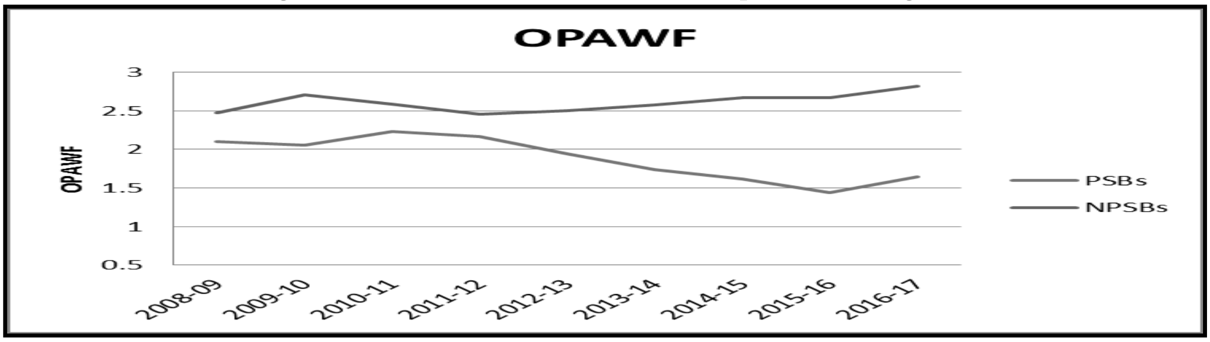
- **Operating Profit as Percentage of Average Working Fund (OPAWF)**

Table 8: OPAWF of PSB and NPSB Group (In Percentage)

Year	Operating Profit as Percentage of Average Working Fund (OPAWF)	
	PSBs	NPSBs
2008-09	2.098	2.475
2009-10	2.055	2.708
2010-11	2.236	2.586
2011-12	2.17	2.453
2012-13	1.948	2.503
2013-14	1.735	2.575
2014-15	1.622	2.674
2015-16	1.444	2.672
2016-17	1.648	2.822
CAGR	-2.97	1.65
Mean	1.884	2.61
SD	0.2795	0.1217
Rank	2nd	1st

Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

Figure 7: OPAWF of PSB and NPSB Group (In Percentage)



Source: Annual Report of Various Banks. Note: Calculated by the Researcher

- **Return on Assets (ROA)**

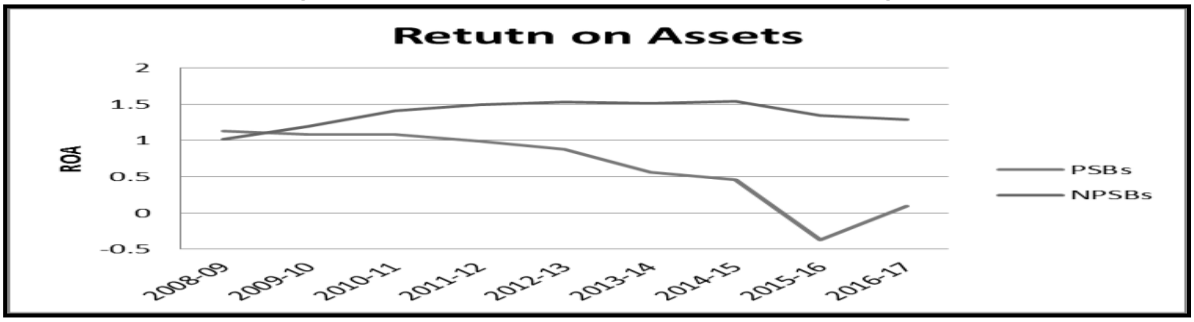
Table 9: ROA of PSB and NPSB Group (In Percentage)

Year	Return on Assets (ROA)	
	PSBs	NPSBs
2008-09	1.126	1.02

2009-10	1.081	1.198
2010-11	1.079	1.408
2011-12	0.987	1.491
2012-13	0.878	1.529
2013-14	0.565	1.508
2014-15	0.455	1.538
2015-16	-0.37	1.346
2016-17	0.096	1.284
CAGR	-26.49	2.92
Mean	0.655	1.369
SD	0.5189	0.176
Rank	2nd	1st

Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

Figure 8: ROA of PSB and NPSB Group (In Percentage)



Source: Annual Report of Various Banks. Note: Calculated by the Researcher

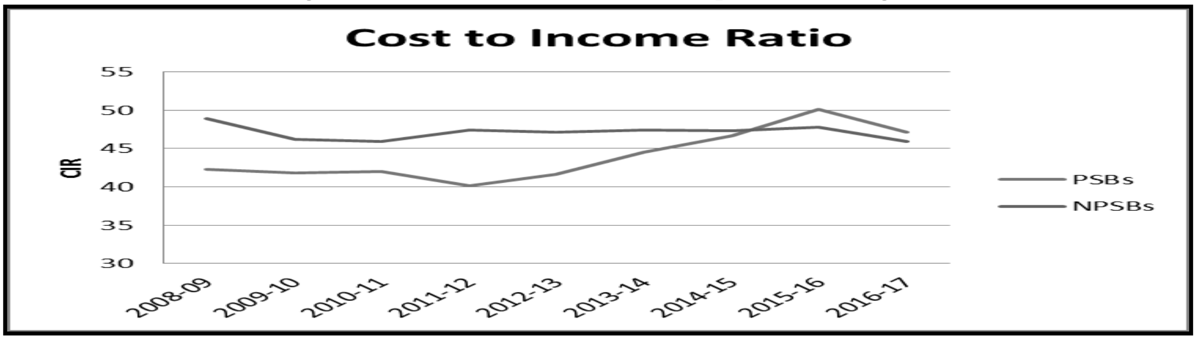
- **Cost to Income Ratio (CIR)**

Table 10: CIR of PSB and NPSB Group (In Percentage)

Year	**Cost to Income Ratio (CIR)**	
	PSBs	**NPSBs**
2008-09	42.266	48.925
2009-10	41.855	46.218
2010-11	41.97	45.935
2011-12	40.164	47.374
2012-13	41.669	47.124
2013-14	44.524	47.374
2014-15	46.66	47.328
2015-16	50.1	47.791
2016-17	47.099	45.897
CAGR	1.36	-0.8
Mean	44.034	47.107
SD	3.279	0.974
Rank	2nd	1st

Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

Figure 9: CIR of PSB and NPSB Group (In Percentage)



Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

From the Table 11 below it has been noticed that on the basis of CAGR value of all the selected parameters of operating efficiency, NPSBs rank first.

Table 11: Overall Ranking with respect to Operating Efficiency of PSB and NPSB Group

	Rank in respect of Operating Efficiency					Cumulative Result	Overall Rank
Bank Group	**IIAWF**	**NIIAWF**	**OPAWF**	**ROA**	**CIR**		
Public Sector Banks	2	2	2	2	2	10	2
Private Sector Banks	1	1	1	1	1	5	1

Source: Compiled by the Researcher from Tables—1.6, 1.7, 1.8, 1.9 and 1.10

C. Comparative Study of Financial Efficiency of PSB and NPSB Group

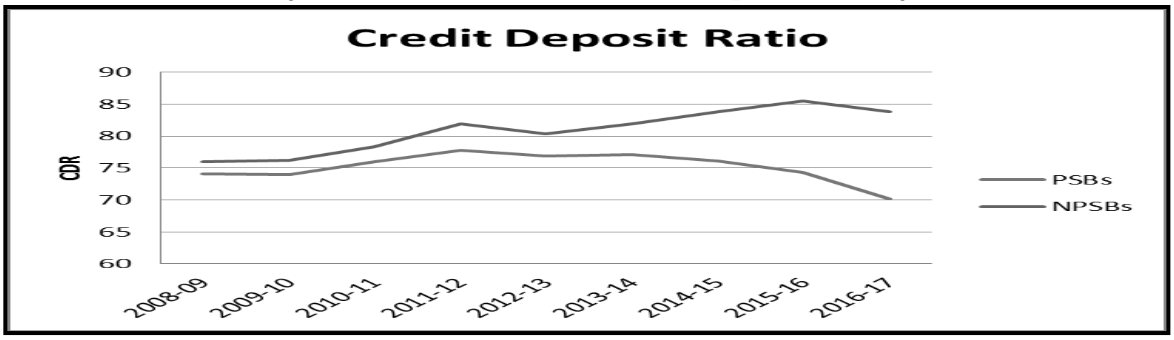
- **Credit Deposit Ratio (CDR)**

Table 12: CDR Of PSB And NPSB Group (In Percentage)

Year	Credit Deposit Ratio(CDR)	
	PSBs	**NPSBs**
2008-09	74.116	76.022
2009-10	73.92	76.153
2010-11	75.969	78.375
2011-12	77.807	81.934
2012-13	76.851	80.334
2013-14	77.055	81.899
2014-15	76.078	83.847
2015-16	74.309	85.525
2016-17	70.182	83.805
CAGR	-0.68	1.23
Mean	75.143	80.877
SD	2.3206	3.42056
Rank	2nd	1st

Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

Figure 10: CDR Of PSB And NPSB Group (In Percentage)



Source: Annual Report of Various Banks. Note: Calculated by the Researcher

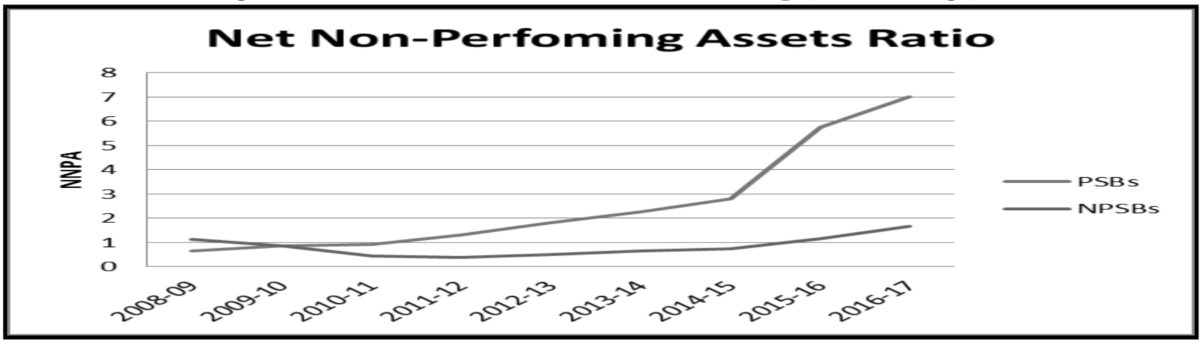
- **Net Non-Performing Assets Ratio**

Table 13: Net NPA Ratio of PSB and NPSB Group (In Percentage)

Year	Net Non-Performing Assets Ratio	
	PSBs	NPSBs
2008-09	0.662	1.123
2009-10	0.861	0.872
2010-11	0.926	0.44
2011-12	1.303	0.375
2012-13	1.82	0.512
2013-14	2.274	0.644
2014-15	2.802	0.747
2015-16	5.76	1.164
2016-17	7.007	1.663
CAGR	34.3	5.03
Mean	2.602	0.8377
SD	2.276	0.4174
Rank	2nd	1st

Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

Figure 11: Net NPA Ratio of PSB and NPSB Group (In Percentage)



Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

- **Capital Adequacy Ratio (CAR)**

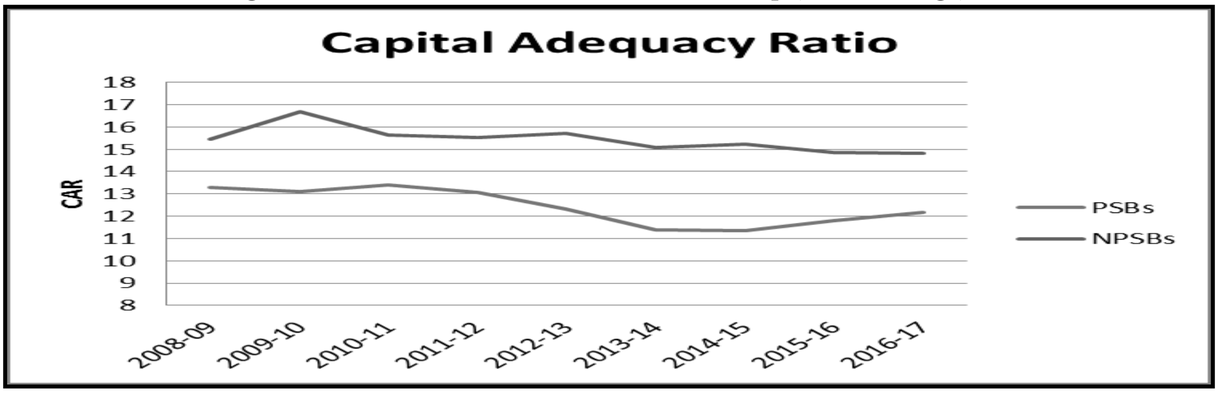
Table 14 : CAR Ratio of PSB and NPSB Group (In Percentage)

Year	Capital Adequacy Ratio (CAR)	
	PSBs	NPSBs
2008-09	13.29364	15.46364

2009-10	13.11	16.68545
2010-11	13.40455	15.62818
2011-12	13.06364	15.53636
2012-13	12.30909	15.71727
2013-14	11.39	15.07364
2014-15	11.36727	15.21182
2015-16	11.80273	14.84909
2016-17	12.17636	14.81273
Mean	12.435	15.44202
SD	0.8095	0.570328

Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

Figure: 12: CAR Ratio Of PSB And NPSB Group (In Percentage)



Source: Annual Reports of Various Banks. Note: Calculated by the Researcher

The above Table and Figure show Bank Group wise Capital Adequacy Ratio. Capital Adequacy Ratio constitutes the most important indicator for evaluating the soundness and solvency of the banks. This indicates ratio of capital funds in relation to bank's assets. It measures the strength and stability of banks. In the table 1.14, Capital Adequacy ratio as per Basel II and Basel III has been given. Higher value of this ratio indicates better solvency and financial strength of the banks and lower value indicates poor solvency and financial strength of the banks. It is clear that both the PSB and NPSB group are quite better off in regard to the CAR. So no CAGR has been calculated for this purpose.

From the Table 15, below it has been noticed that on the basis of CAGR value of all the selected parameters of financial efficiency NPSBs rank first.

Table: 15: Overall Ranking with respect to Financial Efficiency of PSB and NPSB Group

Rank in Respect Of Financial Efficiency				Cumulative Result	Overall Rank
Bank Group	**CDR**	**NPAR**	**CAR**		
PSBs	2	2	Nil	4	2
NPSBs	1	1	Nil	2	1

Source: Compiled by the Researcher from Tables—12, 13, and 14

The data of business per branch has been presented in the Table 1 over a study period of 9 years i.e. from 2008-09 to 2016-17. In order to consider the productivity of banks, business per branch plays a vital role. The Table 1 and Figure 1show that in comparison to Private Sector Banks, Public

Sector Banks are found to be lagging behind due to the poor growth rate regarding deposits and advances. However, on the basis of CAGR value, Public Sector Banks rank first as CAGR compares the starting value and ending value. As far as net profit per branch is concerned, the Table 2 and related Figure 2 reveal that on the basis of CAGR value Private Sector Banks occupy the top rank. The Table 3 and related Figure 3 have made it known that business per employee of Public sector banks is more than that of Private sector banks during the entire study period. Here, business stands for sum total of amount deposited and advances disbursed being taken on the basis of absolute value, while the rate of growth of business of Public Sector Banks is less than that of Private Sector Banks. From the above table and Figure, it has been noticed that on the basis of CAGR value Public Sector Banks rank first. The Table 4 exhibits that the profit per employee of Private Sector Banks for most of the years of the study period shows a better response than the Public Sector Banks which means the higher efficiency of Private Sector Banks. It also should be noted that the profit per employee of Public Sector Banks is negative in 2015-16 and 2016-17, due to negative profit faced by the Public Sector Banks in those years. Public Sector Banks perform poorly as compared to the Private Banks as far as profit per employee is concerned. From the above table 4 and Figure 4 it has been noticed that Private Sector Banks rank first on the basis of CAGR value. It has been noticed from the Table 5 that on the basis of CAGR value of all the selected parameters of productivity, Private Sector Banks and Public Sector Banks both are in the same position. As per the Operating efficiency and financial efficiency is concerned all the above Tables and related Figures reveal that Private Sector Banks rank first on the basis of CAGR value of all the selected parameters of Operating efficiency and financial efficiency.

With a view to comparing the performance regarding productivity, operating efficiency and financial efficiency of selected Public Sector and Private Sector Banks considering selected parameters during the entire study period, Mann-Whitney U Test has been exercised.

Hypothesis

- **Null Hypothesis (H_0):** There is no significant difference in the performance between selected public and private sector banks.
- **Alternative Hypothesis (H_1)**: There is significant difference in the performance between selected public and private sector banks.

Independent Samples Mann-Whitney U Test (The Significance Level is 0.05)		
Parameters	**P Value**	**Decision**
A. Productivity		
• Business Per Branch (BPB)	0.00	Reject the null hypothesis
• Net Profit Per Branch (NPPB)	0.00	Reject the null hypothesis
• Business Per Employee (BPE)	0.008	Reject the null hypothesis
• Profit Per Employee (PPE)	0.004	Reject the null hypothesis
B. Operating Efficiency		
• Interest Income As Percentage of Average Working Fund (IIAWF)	0.008	Reject the null hypothesis
• Non- Interest Income As percentage of Average Working Fund (NIIAWF)	0.00	Reject the null hypothesis
• Operating Profit As percentage of Average Working Fund (OPAWF)	0.00	Reject the null hypothesis
• Return on Assets (ROA)	0.00	Reject the null hypothesis
• Cost to Income Ratio (CIR)	0.024	Reject the null hypothesis
C. Financial Efficiency		
• Credit-Deposit Ratio(CDR)	0.002	Reject the null hypothesis
• Net NPA Ratio (NPAR or NNPA)	0.014	Reject the null hypothesis
• Capital Adequacy Ratio (CAR)	0.00	Reject the null hypothesis

It transpires from above statistical study tables representing Mann-Whitney U test between PSB Group and NPSB Group that all of the parameters of the study reflects a significant difference between the two groups of banks. The presence of significant difference is visible in all the parameters presenting Productivity namely, BPB, BPE, NPPB and PPE in all the parameters of Operating Efficiency IIAWF, NIIAWF, OPAWF, CIR and ROA and also in all three parameters of Financial Efficiency category namely CDR, NNPA and CAR. Hence, in the respect of productivity, Operating Efficiency and Financial Efficiency, there is a significant difference in the performance of select Public Sector and Private Sector Banks.

8. Concluding Remarks

Since the very emergence of Indian financial institutions and even after nationalisation of banks in 1969; productivity, efficiency of the network, portfolio calibre, and profitability had undergone a lot in spite of spectacular quantitative achievement in resource deployment and enhancement in credit negotiation. That is why, transformations and amendments have been going on for the all-round improvements of banking system so that a productive, profit making, combative to attain global recognition and job-oriented Indian economy is sparked off. The most noteworthy endeavour taken by the Government of India and the Reserve Bank of India in this regard, is the initiation of banking reforms, known as NC-I (1991) and in 1998,another Committee recognised as NC-II was brought in to consider and assess the pros and cons of the recommendations, suggested by the preceding Committee. The comprehensive analysis of the study gives the sign of pivotal perfection of NPSBs in respect of NPAs, operating and financial efficiency in comparison to PSBs, on the basis of both CAGR value and Mann-Whitney U Test. As for productivity perfection only, both the sectors have maintained the same status on the basis of CAGR value. In spite of all shortcomings, PSBs are expected not to leave any stone unturned to create a vibrant Indian economy by making the best use of utilisation of assets, keeping the continuation of NPAs down to fight shy of the detrimental consequences of NPAs, complying with the recommendations of NC-I & NC-II with requisite sincerity, frequent monitoring and assessing regarding the utilisation of sanctioned loans, bestowing proper care in connection with the collection of existing loans and better credit culture, using relevant micro-economic conditions of the economy wielding opening more and more branches in the remote and agrarian regions to give accessibility to the poor and needy masses and in case of NPSBs, by taking requisite steps to improve BPE dawdling so long.

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